



# CITY OF PHILADELPHIA

CARMEN F. GUARINO  
COMMISSIONER

WATER DEPARTMENT  
1180 MUNICIPAL SERVICES BUILDING  
PHILADELPHIA, PA. 19107

July 5, 1978

Mr. Manfred Derewal  
P. O. Box 58  
Revere, Pennsylvania 18953

Dear Mr. Derewal:

The Department of Revenue has been requested to prepare special sewer and surcharge bills to be issued to Environmental Chemical Control, Inc., Linda Cochran, Derewal Chemical Co., and Manfred Derewal for the wastes discharged into the City sewer at the Wisconsin Industrial Park in Philadelphia. These bills will follow shortly.

The sewer surcharge is based upon a charge of \$0.023 per pound of suspended solids and/or five-day biochemical oxygen demand above 400 and 350 mg/l respectively. Enclosed is a copy of Sewer Regulation No. 8.

The surcharge was calculated for the lime neutralization of 431,871 gallons of concentrated nitrating acids (August 2, 1976 to May 24, 1977) which were approximately 83 to 85 percent sulfuric. For each pound of sulfuric acid neutralized approximately 1.39 pounds of calcium sulfate are generated. In the calculations no charge was made for the excess lime used or for any inert solids contained in the lime. The exclusion of the excess lime more than makes up for the slight solubility of calcium sulfate; the 400 mg/l allowance; any neutralizing value of the dilute alkaline wastes which would most likely have been offset by the dilute acid wastes in any event; and also allows credit for several truckloads which may have been discharged without neutralization. A figure of 11,500 pounds of sulfuric acid per 1000 gallons of concentrated acid wastes was used in the surcharge calculations.

PHKS003404

EXHIBIT # D-18.d  
DATE 5-15-03

MASTROIANI & FORMAROLI, INC.  
CERTIFIED SHORTHAND REPORTERS

BH 000 5449

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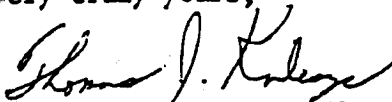
Thus, the surcharge bill (\$158,779.53) is based upon \$0.023 per pound for 6,903,458 pounds of calcium sulfate discharged (11,500 lbs. of sulfuric per 1000 gallons of concentrated acid X 431.871 thousand gallons of concentrated acid X 1.39 lbs. of calcium sulfate per pound of sulfuric acid neutralized).

The volume charge was calculated on the basis of the excess sewer rate for a 4-inch water meter (the largest serving the Wisconsin Industrial Park). The charge is based upon the volume of wastes discharged to the sewer due to the tank truck operation and thus not recorded by the water meters. The volume used to calculate this bill (approximately \$500.00) was 2,013,820 gallons.

Attached is a summary of the volumes upon which the billing was based. Except for the lime slurry which was calculated, the volumes are based upon invoices.

If you have questions concerning this billing, please call me at MJ6-3869 to arrange a meeting.

Very truly yours,

  
THOMAS J. KULESZA, CHIEF  
INDUSTRIAL WASTE UNIT  
WATER POLLUTION CONTROL DIVISION

TJK:trv

Enclosure

PHKS003405

Calculation of Volumes Dis-  
charged into City Sewer Sys-  
tem (Aug., 1976 to Mar. 24, 1978)

Dilute Waste Acids or Alkaline.

<u>Source</u>	<u>Volume</u>
Plymouth Tube	12,000 gals dilute waste acid
Haven Chemical	5,000 gals. dilute alkaline wastes
Chem Fab	18,000 gals. dilute waste acid
American Cyanamid	123,000 gals. dilute alkaline wastes
Sandoz	36,000 gals. dilute alkaline wastes
Air Prods&Chem.	9,000 gals. dilute alkaline wastes
Etched Circuits	3,015 gals. dilute waste acid
Flexible Circuits	5,000 gals. dilute waste acid
Ashland Chemical	99,800 gals, dilute p <sup>H</sup> thalic acid
 Sub-Total	 310,805 gals.

Concentrated Acids or Alkalines.

Ciba-Geigy	42,000 gals. conc. sulfuric
Ashland	181,000 gals, conc. sulfuric
Drake Chemicals	12,806 gals. conc. sulfuric
Bostik So.	37,665 gals. conc. sulfuric
Diaz Chemical	158,400 gals. conc. sulfuric
 Sub-Total	 431,871 gals.

Wastewaters for Lime Slurry Make-Up.

Ashland Chem.	123,200 gals. dye wastes
Ashland Chem.	69,500 gals. CDN washwater
 Sub-Total	 192,700 gals.

Volume of Lime Slurry Trucked.

11,500 lbs. H <sub>2</sub> SO <sub>4</sub>	
<u>1000 gals. of conc. acid</u>	X $\frac{431,871 \text{ gals.}}{\text{time period}} = 4,966,517 \text{ \#H}_2\text{SO}_4$
 .76 lb. (CaOH <sub>2</sub> )	
<u>lb. (H<sub>2</sub>SO<sub>4</sub>)</u>	X $\frac{4,966,517 \text{ \#H}_2\text{SO}_4}{\text{time period}} = 3,774,553 \text{ \#CaOH}_2$
 3,774,553 \#CaOH <sub>2</sub>	
<u>3.5 \#CaOH<sub>2</sub> *</u>	= 1,078,444 gals. H <sub>2</sub> O
gal. of slurry	

PHKS003406

\* internal communication ESB Incorporated re: lime slurry  
 from ChemLine and Hy-Cal.

Total Volume subject to sewer charges = 2,013,820 gals.

Total volume subject to sewer surcharges = 431,871 gals.

PHKS003407